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**DRAFT ENVIRONMENTAL ASSESSMENT  
State of Mississippi MSWIN 20601 Communications Facility  
Bay Springs, Smith County, Mississippi  
Environmental Engineers, Inc. Project No.: JSE01P0818**

Prepared for:  
Towers of Mississippi  
Spanish Fort, Alabama

&

State of Mississippi  
Jackson, Mississippi

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Federal Emergency Management Agency  
Washington, D.C.

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## **1.0 INTRODUCTION**

The State of Mississippi created the Mississippi Wireless Communication Commission (MWCC) by statute in 2005 to oversee the construction and operation of the Mississippi Wireless Integrated Network (MSWIN) project. MSWIN is wireless voice and data capable infrastructure, providing all users with a public-safety grade, statewide, interoperable, seamless roaming radio system. This 700 MHZ Public Safety System is intended to provide highly reliable, fast access, private (within groups and individuals) communications to a wide variety of government and first-responder users within the State of Mississippi. MSWIN is funded largely by federal funds administered through the Department of Homeland Security and the Federal Emergency Management Agency.

The MSWIN network consists of over 140 tower sites to transmit and receive 700 MHz radio communications along with 6.7 GHz microwave connections to nearby towers to backhaul the communication to the closest switch. As part of the network, this tower will support a myriad of equipment that will provide emergency response communications for the population within approximately fifteen miles surrounding this proposed site.

System users vary from public safety, governmental executive and administrative personnel to road maintenance crews. In addition to routine communications, users will also depend on the network during life threatening conditions and emergency situations. Flooding, hurricanes, earthquakes, tornadoes, and other natural or man-made catastrophes often require effective wide-area, interoperable communications. Thus, communications within the State of Mississippi are most critical when they are most susceptible to failure. Consequently, a high degree of redundancy and fail-safe design is essential to this success of this project.

The proposed tower facility will be accessed via locked gate off of Highway 531. The tower will have two parking spaces at the entrance of the fenced tower compound. The compound surrounding the tower and equipment will consist of a seven-foot tall security fence with an additional foot of barbed wire surrounding the site. The tower will be built to withstand extreme weather conditions and engineered and constructed to the latest tower standards of ANSI/TIA-222-G (class III supporting public safety and mission critical communications). All radio equipment on the tower will be operated in compliance with all requirements of frequency and power output as regulated by the Federal Communications Commission. Additionally, the gates and fence will have attached no trespassing and other notice and warning signs as may be required by applicable local and federal laws.

Routine operations of the tower facility will have limited vehicular traffic excepting maintenance and routine periodic inspections. Running water or sanitary facilities are not used at the facility. Power facilities are available and will be routed in during construction.

The tower will not interfere with local residence or the use of the surrounding properties. The increase of vehicular traffic into the area is anticipated to be negligible. The tower and communication systems located thereon will not interfere with other communication systems in the area.



The tower is designed to allow other uses on the structure to promote collocation with up to three positions suitable for cellular telephone type wireless service providers. This further reduces the potential need for additional towers in the area. In addition, the tower is designed to accommodate additional government communications equipment as the need to provide mission critical radio infrastructure increases in the future.

## **1.1 PURPOSE**

The purpose of the National Environmental Policy Act (NEPA) Checklist screening and Environmental Assessment (EA) is to provide information regarding the subject property required by the Federal Communication Commission (FCC), as described in Title 47 of the Code of Federal Regulations (CFR) Chapter I, Part 1, Subpart I titled *Procedures Implementing the National Environmental Policy Act (NEPA) of 1969*, Sections 1.1307(a)(1) through (8). In addition, this EA was prepared to address items required by the Federal Emergency Management Agency (FEMA) as part of its environmental and historical review process.

This project is being funded using a FEMA grant (2008-MS-MX-0001) and the State of Mississippi's expenditures at this site will include purchase and installation of 700 MHz RF equipment and microwave telecommunication backbone network, equipment shelter, network integration, acceptance testing, communication hardware optimization and system exercising and piloting of interoperability capabilities of the network.

NEPA requires that Federal agencies consider the environmental consequences of proposed actions before deciding to fund an action. The intent of NEPA is to protect, restore, or enhance the environment through well-informed decision making. The Council on Environmental Quality was established under NEPA to implement and oversee Federal policy in this process and implemented the procedural provisions of NEPA codified at 40 CFR 1500-1508. An Environmental Assessment (EA) related to a FEMA program must be prepared according to the requirements of the Stafford Act and 44 CFR Part 10. This EA has been prepared to evaluate the potential effects to the natural and human environment from construction of a new communications tower.

## **1.2 NEED**

The proposed communications facility is part of the proposed Mississippi Wireless Integrated Network (MSWIN). This network is intended to facilitate seamless communications between federal, state, and local emergency personnel during natural or man-made disasters and/or emergencies.

## **1.3 ALTERNATIVES CONSIDERED**

Four alternatives were considered for the Proposed Action (construction and operation of the proposed MSWIN 20601 Communications Facility). These alternatives included the Proposed Action, No-Action Alternative, collocation, and alternate technologies. These alternatives are described below.



### **1.3.1 Proposed Action**

The Proposed Action consists of construction of a 490-foot guyed communications tower and associated equipment compound to facilitate installation and operation of wireless communications antennae to provide integrated emergency communications between federal, state, and local agencies. These antennae include microwave dishes that are to be used to send and receive information over long distances without the limitations associated with connection to land lines/cables (primarily interruptions in service due to damage to land lines/cables during emergencies or natural disasters).

### **1.3.2 No-Action Alternative**

Under the No-Action Alternative the proposed project would not be constructed. No adverse environmental impacts are believed to be associated with the No-Action Alternative. However, the no-action alternative would result in a cost to the residents in the service area of this project associated with loss of integrated emergency communications service in the subject area. This cost must be compared to the potential adverse environmental impacts and social cost benefits associated with the Proposed Action.

Wireless communication systems provide a social benefit through increased ease of non-business communication. Roadway accidents, fires, and other emergency situations can be reported faster using wireless communications equipment. Wireless communications also provide critical assistance to emergency personnel during natural disasters (flood, hurricanes, tornadoes, etc.) and national emergencies.

### **1.3.3 Collocation**

It is our understanding that the State of Mississippi and Towers of Mississippi explored collocation opportunities within the required service area for this project. However, no collocation opportunities meeting the technical requirements for the proposed project were identified.

### **1.3.4 Alternate Technologies**

Among the possible alternatives to the MSWIN network are a) satellite communications, b) commercial cellular communications, and c) the existing State operated networks.

Satellite communications is commercially available and is currently used as a backup communications method in the event the primary systems fail. Satellite communications are cost prohibitive for the 30,000 users who would be a part of the MSWIN radio network.

Commercial cellular communication services are available in much of the service area MSWIN will provide, but not all of the State of Mississippi is covered by a single cellular operator. MSWIN will provide 97% radio coverage over the state, is more secure than commercial cellular service, is more



survivable in the event of natural disasters, and is dedicated to public safety missions. Cellular is an adequate limited backup to the routine and emergency requirements of public safety, but is not adequate for daily operational usage and extreme emergency situations, as compared to the MSWIN system.

The existing State operated radio systems are aging and limited in their coverage reach. The field and dispatch radios are nearing obsolescence and are difficult to find new replacement parts for. The needs of a growing Mississippi will be met by the new technology the MSWIN network provides.

#### 1.4 AFFECTED ENVIRONMENT

The site is depicted on the United States Geological Survey 7.5-minute Topographic Quadrangle “Bay Springs, Mississippi,” dated 1974. The site is located in the northwest ¼ of the northeast ¼ of Section 22, Township 1 North, Range 9 East, Smith County, Mississippi, at latitude 31°54’54.800” north and 89°21’38.845” west (Figure 1). The site consists of a proposed communications facility located off of Highway 531 near Bay Springs, Mississippi. The site is located in a pasture and slopes gently downward to the northwest. Access to the site will be provided by a proposed access road that will enter the site from the east. Proposed activities by the State of Mississippi consist of installation of communications antennae and associated cable on a 490-foot guyed communications tower to be constructed and owned by Towers of Mississippi. The State of Mississippi will place support equipment on a concrete pad within the tower compound to be provided by Towers of Mississippi. A copy of the portion of the 2007 aerial photograph depicting the site layout has been included as Figure 2 and site photographs have been included as Figures 3 through 7. A copy of the site survey is included as Appendix A.

#### 1.5 FCC ENVIRONMENTAL COMPLIANCE CHECKLIST

POTENTIAL ENVIRONMENTAL IMPACT	YES	NO
1. Will this facility be located in an officially designated wilderness area?	_____	X
2. Will this facility be located in an officially designated wildlife preserve?	_____	X
3. Will this facility affect listed threatened or endangered species or designated critical habitats?	_____	X
4. Is this facility likely to jeopardize the continued existence of any proposed threatened or endangered species or result in the destruction or adverse modification of proposed critical habitats?	_____	X
5. Will the facility affect districts, sites, buildings, structures, or objects that are listed or eligible for listing in the National Register of Historic Places?	_____	X
6. Will the facility affect Indian religious sites?	_____	X
7. Will the facility be located in a floodplain?	_____	X
8. Will the facility involve significant change in surface features (i.e. wetland fill, deforestation, diversion)?	_____	X
9. Will the facility be located in a residential area and equipped with high intensity white lights?	_____	X
10. Will the facility result in a potential exposure of workers or the general public to levels of radio frequency radiation in excess of the MPE?	_____	X





## 1.6 INFORMATION SOURCES

Completion of this Draft Environmental Assessment included utilization of the following sources:

1. Review of the portion of the 2007 aerial photograph depicting the site available through Maptech.
2. Review of the site survey prepared by SMW Engineering, Inc.
3. Review of information regarding National Scenic Trails and All-American Roads available on the Mississippi Department of Transportation Internet website.
4. Review of information regarding wild and scenic rivers in the vicinity of the proposed project available at Rivers.gov.
5. Review of the Nationwide Programmatic Agreement for Review of Effects on Historic Properties for Certain Undertakings Approved by the Federal Communications Commission.
6. Correspondence to and from the Department of the Army Corps of Engineers regarding potential impacts to jurisdictional wetlands by the proposed project.
7. A review of information available on the USFWS Internet website, at Nationalatlas.gov, and on Wilderness.net regarding officially designated wilderness areas or wildlife refuges.
8. Correspondence from the USFWS regarding threatened and endangered species on or near the site.
9. Review of the FCC Form 620 prepared for the site by MRS Consultants, LLC and Environmental Engineers, Inc.
10. Correspondence from the Mississippi Department of Archives and History regarding historical resources and properties listed on or eligible for listing on the National Register of Historic Places on or near the site.
11. Review of the Tower Construction Notification System Notice of Organizations Which Were Sent Proposed Tower Construction Notification Information provided by the FCC.
12. Correspondence and conversations with representatives of the Choctaw Nation of Oklahoma, Kialegee Tribal Town, Mississippi Band of Choctaw Indians, Seminole Tribe of Florida, and the Tunica-Biloxi Indians of Louisiana regarding wireless telecommunications projects.
13. Review of the FEMA Flood Insurance Rate Map regarding flood zone designations for the site.
14. Review of information available on the USFWS National Wetlands Inventory Internet website containing the site regarding potential jurisdictional wetlands on or adjacent to the site.





15. Information regarding the MSWIN system provided by Towers of Mississippi.
16. Information regarding site soils available through the United States Department of Agriculture (USDA) Web Soil Survey Internet website.
17. Correspondence to and from the USDA Natural Resource Conservation Service (NRCS) office in Jackson, Mississippi regarding impacts to prime farmland, unique farmland, and land of statewide or local importance.
18. A reconnaissance of the subject property.

## **2.0 WILDERNESS AREAS/PRESERVES**

The proposed communications facility will not adversely affect wilderness areas. Based on a review of information available through the Wilderness.net Internet website, two wilderness areas are located in Mississippi – Black Creek Wilderness and Leaf Wilderness. Each of these wilderness areas are located in the southeastern portion of the state and would not be affected by the proposed communications facility. Maps showing the locations and boundaries of the Black Creek Wilderness and the Leaf Wilderness are included as Appendix B.

The proposed communications facility will not adversely affect any wildlife refuges. Based on a review of information available at the USFWS Internet website and at the Nationalatlas.gov Internet website, the site is not located within the boundaries of, or adjacent to, any wildlife refuges. Maps showing the location of wildlife refuges in the state of Mississippi are included as Appendix C.

## **3.0 BIOLOGICAL RESOURCES**

### **3.1 THREATENED AND ENDANGERED SPECIES**

The proposed communications facility will not adversely affect federally-listed threatened or endangered species. Information regarding the proposed wireless telecommunications tower was submitted to the USFWS by Environmental Engineers, Inc. The USFWS responded via letter dated February 23, 2009 stating "...the Service [USFWS] determines that this project will have no effect on listed species or critical habitat." Copies of the correspondence to and the response from the USFWS are included as Appendix D.

The United States Fish and Wildlife Service (USFWS) developed voluntary recommendations regarding communications tower siting, construction, operation, and decommissioning. In summary, the recommendations include collocating of antennae on existing towers or other structures, limiting the height of new towers to less than 199 feet, use of non-guyed towers (monopoles, self-supporting towers), use of the minimum lighting permissible, etc. Construction of a tower less than 199 feet in height would not meet project design or coverage requirements. However, the minimum lighting



necessary will be used for the proposed communications facility. A copy of the USFWS communications tower siting, construction, operation, and decommissioning recommendations are included in Appendix E.

### **3.2 MIGRATORY BIRDS**

Towers of Mississippi and the State of Mississippi considered collocation opportunities as an alternative to the proposed action. However, the technical loading requirements for this project are for all used structures to be engineered and constructed to the latest tower standards of ANSI/TIA-222-G (class III supporting public safety and mission critical communications). As this is the latest engineering standard and the Class III (public safety) level is the most rigorous engineering standard in the tower industry, there are no existing towers or other structures within the coverage area for this project that can be modified to meet this standard and handle the loading requirements MSWIN will place on the tower.

Based on information provided by Towers of Mississippi for this project, it is our understanding that medium intensity flashing white obstruction lights (day and night) will be installed on this tower.

Construction of a self-supporting tower is not practical to provide the required service. According to Towers of Mississippi, the cost of a self-support tower is roughly 2.5 times the cost of a guyed tower, and if all the remaining towers in the MSWIN project were constructed as self supporting towers the extended cost would well exceed an additional \$50-70 million in additional construction costs. Though not favored by USFWS, the impact area of this 490-foot guyed tower in the air is roughly 4,410 square feet whereas the impact area of a 490-foot self-supporting tower is much larger at 36,015 square feet (an 800% increase in the amount of airspace taken).

Bird flight diverters will not be installed on the proposed tower. According to Towers of Mississippi, bird flight diverters are expensive and difficult to maintain over the life of the tower. Adding daytime warning devices to the remainder of the towers in this project would exceed \$5 million in additional capital requirements.

Security lighting at this facility will consist of motion-activated, wall-mounted lights on the equipment shelter at the site.

## **4.0 CULTURAL RESOURCES**

### **4.1 NATIONWIDE PROGRAMMATIC AGREEMENT**

On March 7, 2005 the FCC implemented a Nationwide Programmatic Agreement (NPA) regarding Section 106 reviews (State Historic Preservation Officer and Indian tribal consultation) for wireless telecommunications tower sites. In summary, the NPA set forth rules regarding consultation with the State Historic Preservation Officer (SHPO) in each state where a proposed wireless



telecommunications tower is to be constructed; consultation with Indian tribes and Native Hawaiian Organizations (NHOs) that would have been historically located in the area of the proposed wireless telecommunications tower or had indicated an interest in the geographical area containing the proposed wireless telecommunications tower; and involvement of the public and/or local government. As part of the process associated with the NPA the FCC developed the Tower Construction Notification System (TCNS) and FCC Form 620. The TCNS is described in Section 4.2 and FCC Form 620 is described in Section 4.3.

The NPA requires that a response be received from each Indian tribe or NHO that has indicated an interest in the state or geographical area containing the proposed tower. If no response is received from a particular Indian tribe or NHO within a reasonable time (typically 30 days), the NPA requires that the non-responding Indian tribe or NHO be contacted a second time in an effort to obtain a response. If the Indian tribe or NHO continues to be unresponsive to the initial or follow-up inquiries, the FCC must be contacted to consult with the non-responding Indian tribe or NHO.

## **4.2 FCC TOWER CONSTRUCTION NOTIFICATION SYSTEM**

The TCNS is an Internet-based notification system developed by the FCC that allows input of basic information regarding the proposed location, type, and height of a new wireless telecommunications tower. This information is then made available to Indian tribes and NHOs that have expressed an interest in the state or geographical location containing the proposed wireless telecommunications tower via electronic or regular mail. According to the FCC the TCNS can be used as the initial contact to Indian tribes or NHOs.

Information regarding the proposed wireless telecommunications tower was submitted to Indian tribes, NHOs, and SHPOs via the TCNS on January 26, 2009. The FCC assigned Notification I.D. #48507 to the notification submitted for this proposed wireless telecommunications tower. The FCC sent an electronic mail notification to our office on January 30, 2009 listing the Indian tribes, NHOs, and SHPOs that were contacted through the TCNS regarding the proposed tower. As noted in Section 4.1, the NPA requires that we obtain a response from each Indian tribe or NHO that has indicated an interest in the geographical area or state containing the site.

Environmental Engineers, Inc. used the list of Indian tribes that had defined their area of geographic interest on the FCC Internet web site, conversations with Tribal Historic Preservation Officers (THPOs), Internet web sites for many of the Indian tribes and Alaskan villages, and the *Encyclopedia of North American Indians* by Frederick E. Hoxie (published in 1996 by Houghton Mifflin) to determine which Indian tribes included in the TCNS list would be interested in this wireless telecommunications tower site. This review indicated that the following Indian tribes would have a potential interest in this wireless telecommunications tower site: Choctaw Nation of Oklahoma, Kialegee Tribal Town, Mississippi Band of Choctaw Indians, Seminole Tribe of Florida, and the Tunica-Biloxi Indians of Louisiana. A description of the follow-ups to and responses from each of these Indian tribes are included in Sections 4.5.1 through 4.5.5. Copies of the TCNS notifications and list of Indian tribes, NHOs, and SHPOs are included in Appendix F.



### **4.3 FCC FORM 620**

MRS Consultants, LLC and Environmental Engineers, Inc. completed the FCC Form 620 required for submittal to those Indian tribes requesting additional information regarding the proposed wireless telecommunications tower and the SHPO. MRS Consultants, LLC personnel satisfy the United States Secretary of the Interior's Professional Qualification Standards. A copy of the FCC Form 620 prepared for this site is included in Appendix G.

### **4.4 STATE HISTORIC PRESERVATION OFFICER**

The FCC Form 620 was submitted to the Mississippi Department of Archives and History (MDAH) for review. The MDAH responded via letter dated February 17, 2009 stating "...we concur that no cultural resources listed in or eligible for listing in the National Register of Historic Places will be directly or visually affected. Therefore, we have no reservations with the project." Copies of the correspondence to and from the MDAH are included in Appendix H.

### **4.5 INDIAN TRIBAL CONSULTATION**

Environmental Engineers, Inc. followed up with each of the Indian tribes (as necessary) that we had identified through our review of the TCNS listing provided by the FCC for this site. Sections 4.5.1 through 4.5.5 describe our follow-up contacts to each of these Indian tribes and their responses.

#### **4.5.1 Choctaw Nation of Oklahoma**

Ms. Caren Johnson of the Choctaw Nation of Oklahoma responded via electronic mail on March 20, 2009 regarding FCC TCNS #48507 stating that "The Choctaw Nation of Oklahoma has reviewed cell tower(s) FCC # 48507 and based on the information provided to the best of our knowledge it will have no adverse effect on any historic properties in the project's area of potential effect. However, should construction expose buried archaeological or building materials such as chipped stone, tools, pottery, bone, historic crockery, glass or metal items, or should it uncover evidence of buried historic building materials such as rock foundations, brick, or hand poured concrete, this office should be contacted immediately @ 1-800-522-6170 ext. 2137." Copies of the correspondence to and from the Choctaw Nation of Oklahoma are included in Appendix I.

#### **4.5.2 Kialegee Tribal Town**

The TCNS listing (Appendix F) for this site included information from the Kialegee Tribal Town that states "If the Applicant receives no response from the Kialegee Tribal Town within 30 days after notification through TCNS, the Kialegee Tribal Town has no interest in participating in pre-construction review for the site. The Applicant, however, must immediately notify the Kialegee Tribal Town in the event archaeological properties or human remains are discovered during construction." The TCNS notification for this site is dated January 30, 2009 and the end of the 30-day period



indicated by the Kialegee Tribal Town was March 1, 2009. Environmental Engineers, Inc. has not received a response from the Kialegee Tribal Town as of the date of this report. Therefore, it is our understanding that additional consultation with the Kialegee Tribal Town is not necessary.

#### **4.5.3 Mississippi Band of Choctaw Indians**

The TCNS listing (Appendix F) for this site included information from the Mississippi Band of Choctaw Indians that stated “If the applicant/tower builder receives no response from the Mississippi Band of Choctaw Indians within 30 days after you have e-mailed the [FCC Form 620]...then the Mississippi Band of Choctaw Indians has no interest in participating in pre-construction review for the proposed site. The Applicant/tower builder, however, must immediately notify the Mississippi Band of Choctaw Indians in the event archaeological properties or human remains are discovered during construction...” The Mississippi Band of Choctaw Indians was notified via electronic mail dated February 9, 2009 and the end of the 30-day period indicated by the Mississippi Band of Choctaw Indians was March 11, 2009. Environmental Engineers, Inc. has not received a response from the Mississippi Band of Choctaw Indians as of the date of this report. Therefore, it is our understanding that additional consultation with the Mississippi Band of Choctaw Indians is not necessary. A copy of the electronic mail submitted to the Mississippi Band of Choctaw Indians is included in Appendix I.

#### **4.5.4 Seminole Tribe of Florida**

Ms. Dawn Hutchins of the Seminole Tribe of Florida (STOF) responded via TCNS on February 17, 2009 in response to TCNS #48507 stating, “The STOF-THPO concurs with your findings of ‘no historic properties’. However, the STOF-THPO would like to be informed should any archaeological and/or historic resources be discovered inadvertently during the construction process.” Copies of the correspondence to and from the Seminole Tribe of Florida are included in Appendix I.

#### **4.5.5 Tunica-Biloxi Indians of Louisiana**

Mr. Earl Barbry of the Tunica-Biloxi Indians of Louisiana was contacted via electronic mail on May 3, 2005 regarding submittal of wireless telecommunications projects. Mr. Barbry responded via electronic mail on May 3, 2005 and indicated that he wanted to be notified regarding cell tower requests via electronic mail and that if he had not responded within 30 days of our contacting him, the project can proceed. We contacted Mr. Barbry regarding this site via electronic mail on February 9, 2009, and the end of the 30-day response period as indicated by Mr. Barbry was March 11, 2009. We have not received a response from Mr. Barbry as of the date of this report. Therefore, we have assumed that the Tunica-Biloxi Indians of Louisiana concur with the proposed project. Copies of the electronic mail to and from the Tunica-Biloxi Indians of Louisiana are included in Appendix I.

### **4.6 INADVERTENT DISCOVERY**

The personnel that will have a potential to be involved in land-disturbing activities must be instructed to stop work immediately and contact the Indian tribes that have indicated an interest in the project





area and SHPO in the event of an inadvertent discovery of human remains or cultural materials. The Indian tribe, contact name, and telephone number for each of the interested Indian tribes and SHPO are included in the table below. A copy of this information must be provided to all personnel that would have a potential to be involved in land-disturbing activities at the site.

Organization	Contact	Telephone Number
Mississippi Department of Archives and History - SHPO	Mr. Jim Woodrick	(601) 576-6940
Choctaw Nation of Oklahoma	Mr. Terry Cole	(800) 522-6170 x2137
Kialegee Tribal Town	Mekko Jennie Lillard	(405) 452-5200
Mississippi Band of Choctaw Indians	Mr. Ken Carleton	(601) 650-7316
Seminole Tribe of Florida	Ms. Dawn Hutchins	(863) 902-1113 x103
Tunica-Biloxi Indians of Louisiana	Mr. Earl Barbry, Jr.	(318) 253-0213 x6851

#### **4.7 LOCAL GOVERNMENT/PUBLIC NOTICE**

The Smith County Board of Supervisors was contacted regarding the proposed wireless communications tower via letter dated February 3, 2009. No response has been received from the Smith County Board of Supervisors as of the date of this report. A public notice was published in the *Smith County Reformer* on February 4, 2009 requesting comment regarding potential impacts to historical or archaeological properties by the proposed wireless communications tower. No comments have been received as of the date of this report in response to the public notice. Copies of the correspondence to the Smith County Board of Supervisors and a copy of the public notice are included in Appendix J.

#### **5.0 FLOODPLAIN INFORMATION**

According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) "Panel 150 of 175, Smith County, Mississippi and Incorporated Areas" effective date December 3, 1993, the site is located in an area designated as Zone X (no shading) which is described as areas outside the 500-year floodplain. Therefore, the site is not located within a floodplain. It should be noted that the towers that comprise the MSWIN system are considered critical facilities and project design requirements include that the communications equipment at each facility be elevated at least five feet above the 500-year flood elevation (where mapped). In areas where the 500-year floodplain is not mapped, the equipment will be elevated a minimum of five feet above the 100-year base flood elevation. The FIRM depicting the site location does not include areas of 500-year flood; therefore, it is our understanding that the support equipment at this facility will be elevated at least five feet above the 100-year base flood elevation. The portion of the FEMA FIRM depicting the site is included as Figure 8.

#### **6.0 WETLANDS AND SENSITIVE VEGETATION DELINEATION**

Information on the USFWS National Wetlands Inventory (NWI) Internet website was reviewed to determine if any wetlands were delineated on or near the site. No wetlands were depicted on or near



the site on the NWI Map. A copy of a portion of the NWI map depicting the site has been included as Figure 9.

A site reconnaissance which included observations to determine if the subject site or immediately adjacent property contained any jurisdictional wetlands (as defined by the United States Army Corps of Engineers) was conducted on February 2, 2009 by Environmental Engineers, Inc. No potential jurisdictional wetland indicators were noted on the site at the time of our site reconnaissance.

In addition, information regarding the proposed project was submitted to the Department of the Army Corps of Engineers (COE) for review. The COE responded via letter dated December 15, 2009 stating “A desk review of the information submitted revealed that a Department of the Army permit pursuant to section 404 of the Clean Water Act will not be required for your project.” Copies of the correspondence to and from the Department of the Army are included as Appendix K.

## **7.0 PRIME FARMLAND**

From the United States Department of Agriculture Natural Resource Conservation Service (NRCS) Internet website:

*The National Agricultural Land Study of 1980-81 found that millions of acres of farmland were being converted in the United States each year. The 1981 Congressional report, Compact Cities: Energy-Saving Strategies for the Eighties, identified the need for Congress to implement programs and policies to protect farmland and combat urban sprawl and the waste of energy and resources that accompanies sprawling development.*

*The Compact Cities report indicated that much of the sprawl was the result of programs funded by the Federal Government. With this in mind, Congress passed the Agriculture and Food Act of 1981 (Public Law 97-98) containing the Farmland Protection Policy Act (FPPA)—Subtitle I of Title XV, Section 1539-1549. The final rules and regulations were published in the Federal Register on June 17, 1994.*

*The FPPA is intended to minimize the impact Federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. It assures that—to the extent possible—Federal programs are administered to be compatible with state, local units of government, and private programs and policies to protect farmland. Federal agencies are required to develop and review their policies and procedures to implement the FPPA every two years.*

*For the purpose of FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to FPPA requirements does not have to be currently used for cropland. It can be forest land, pastureland, cropland, or other land, but not water or urban built-up land.*





The Area of Interest (AOI) is characterized by the Heidelberg soil series and the Ruston soil series, with a small percentage of Smithdale fine sandy loam. Heidelberg soils are deep, well drained, moderately permeable soils, typically extending to a depth of 80 inches. They have seven soil horizons, ranging from dark grayish brown sandy loam in the top horizon to brown, yellowish red, and red fine sandy loam. Heidelberg soils are typically seen on nearly level to steeply sloping uplands, and range from 8 to 35 percent slopes within the AOI. Neither Heidelberg sandy loam, 8 to 15 percent slopes, which makes up 23.6 percent of the AOI, nor Heidelberg sandy loam, 15 to 35 percent slopes, which makes up 45 percent of the AOI, are considered to be prime farmland.

The Ruston series consists of very deep, well drained, moderately permeable soils that formed in loamy marine or stream deposits, and extends to a depth of approximately 85 inches. Its eight soil horizons are comprised of fine sandy loams, transitioning to fine sandy clay loams at lower strata. These soils are typically found on nearly level to moderately sloping uplands, and are characterized by medium to rapid runoff. Ruston fine sandy loam, 2 to 5 percent slopes and 5 to 8 percent slopes, which comprise 19.1 and 9.0 percent of the AOI, respectively, are both considered to be prime farmland.

Smithdale soils are deep, well drained soils, typically extending to a depth of 80 inches, with moderate permeability, often found on ridgetops and hillslopes. There are five soil horizons, ranging from a dark grayish brown sandy loam on the top horizons, to sandy clay loam in the mid-range and back to sandy loam on the lower horizons. These soils can be found in gently sloping to steep slope areas, and range from 8 percent slopes to 15 percent slopes within the AOI. Smithdale fine sandy loams, 8 to 15 percent slopes, which make up 3.3 percent of the AOI, are not considered prime farmland.

In a letter dated November 17, 2009, the NRCS determined that the proposed action would not result in permanent adverse effects on prime farmland, therefore a FPPA determination was not required. Copies of correspondence and soil information from the USDA Web Soil Survey website are included in Appendix L.

## **8.0 LIGHTING**

The proposed tower will not be equipped with high intensity white lighting.

## **9.0 RADIO FREQUENCY RADIATION**

It is our understanding that the proposed antenna should comply with FCC requirements for RF related emissions established in 47 CFR Section 1.1307 provided that the antennas are mounted such that the height above ground level for the lowest point of the antennas is at least 10 meters.

## **10.0 ADDITIONAL ENVIRONMENTAL EVALUATION**

### **10.1 NATIONAL SCENIC AND HISTORIC TRAILS**



According to the Mississippi Department of Transportation Mississippi Scenic Byways map, there are no National Scenic Trails or All-American Roads in Smith County, Mississippi. Copies of the map showing National Scenic Trails and All-American Roads in the vicinity of the site are included in Appendix L.

## **10.2 NATIONAL WILD AND SCENIC RIVERS**

A review of information available through the Rivers.gov Internet website indicates that one Wild and Scenic River is located in Mississippi. This Wild and Scenic River is a section of Black Creek located in the DeSoto National Forest in southeastern Mississippi. The proposed communications facility will not have an adverse affect on any designated Wild and Scenic River. Information regarding the Black Creek Wild and Scenic River is included as Appendix M.

## **11.0 CUMULATIVE IMPACTS**

Cumulative impacts are an incremental impact on either the natural environment or human environment by an action when added to past and anticipated future actions. No ongoing or proposed actions are known for the project area. As described in Section 1.0 of this document, the proposed tower is designed to allow collocation of up to three additional cellular-type service providers, thereby potentially reducing cumulative impacts.

## **12.0 PUBLIC PARTICIPATION**

### **12.1 LOCAL GOVERNMENT**

The Smith County Board of Supervisors was contacted regarding the proposed wireless communications tower via letter dated February 3, 2009. No response has been received from the Smith County Board of Supervisors as of the date of this report.

### **12.2 PUBLIC NOTICE**

A public notice was published in the *Smith County Reformer* on February 4, 2009 requesting comment regarding potential impacts to historical or archaeological properties by the proposed wireless communications tower. No comments have been received as of the date of this report in response to the public notice. In addition, notice of availability of this draft Environmental Assessment will be published in *The Clarion Ledger*.

